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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,911	03/28/2001	Daniel Crosson	10006946-1	4361

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

VU, THONG H

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,911

Applicant(s)

CROSSON, DANIEL

Examiner

Thong H. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. Claims 1-52 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. Claims 1,15,25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.(i.e.: the predetermined criteria is not defined in specification).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-52 are rejected under 35 U.S.C. § 103 as being unpatentable over Arndt et al [Arndt, 6,826,611 B1] in view of Oehrke et al [Oehrke, 6,735,631 B1].
5. As per claim 1, Arndt discloses a method for internet protocol (IP) address selection, comprising the steps of:

assigning a single domain name to a set of server IP addresses [Arndt, a DNS contains the server IP addresses, col 5 lines 37-col 6 line 3];

receiving a request for the domain name from a client IP address [Arndt, DNS with IP address, col 1 lines 33-44];

selecting an IP route from the set of routes (i.e.: router) which meets predetermined criteria [Arndt, select router based on routing protocol being used, col 5 line 50-col 6 line 3; predetermined time, col 4 lines 1-25].

However Arndt does not explicitly detail

retrieving a set of IP routes linking the server IP addresses and the client IP address;

In same endeavor, Oehrke discloses method for network redirecting or routing using a redirector or router maintains a matrix of source IP (i.e.: client) and destination IP (i.e.: server) relationship for a predetermined or selected period of time [Oehrke, col 11 lines 44-55].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the technique of using a set or matrix of client-server or source-destination addresses for selecting a shortest path as taught by Oehrke into the Arndt's apparatus in order to improve the routing process. Doing so would enhance the capability of routers to handle traffic over Internet.

6. As per claims 2,11 Arndt discloses retrieving the set of IP routes from a cache database [Arndt, cache ARP, col 5 lines 17-36].

7. As per claims 3,12 Arndt discloses retrieving the set of IP routes from an IP routes database [Arndt, discovery database, col 5 lines 10-15; col 6 lines 14-26].
8. As per claim 4, Arndt discloses retrieving the set of IP routes from a set of routers using a BGP protocol [Arndt, Gateway protocol, col 5 line 58].
9. As per claims 5,18 Arndt discloses retrieving the set of IP routes from a set of routers using an SNMP protocol [Arndt, SNMP, col 5 line 44].
10. As per claim 6, Arndt discloses retrieving the set of IP routes from a set of routers using a Telnet protocol as inherent feature of routers.
11. As per claim 7, Arndt discloses selecting the IP route from the set which has a shortest AS path (Autonomous System) [Arndt, shortest path, col 5 lines 58].
12. As per claim 8, Arndt discloses selecting the IP route from the set which has a lowest origin type [Arndt, the lowest DNS server IP address, col 5 lines 50-col 6 line 3].
13. As per claim 9, Arndt discloses selecting the IP route from the set which has a lowest MED (Multi-Exit-Disc) [Arndt, the lowest DNS server IP address, col 5 lines 50-col 6 line 3].

14. As per claim 10, Arndt discloses selecting the IP route from the set equal to a default IP address [Arndt, default router, col 3 lines 25-33].

15. As per claim 13, Arndt discloses defining an enhanced address resource record, including a domain name, a list of corresponding servers and routers, router retrieval parameters, a default client/server IP route, and timeouts [Arndt, select DNS from the last user specific configuration, col 5 line 50-col 6 line 3; predetermined time, col 4 lines 1-25].

16. As per claim 14, Arndt discloses transmitting an IP address from the set of server IP addresses which corresponds to the selected IP route [Arndt, DNS with IP address, col 1 lines 33-44].

17. As per claim 25, Arndt discloses A system for Internet protocol (IP) address selection comprising:

- a set of servers, having a single domain name [Arndt, DNS contains server addresses, col 5 lines 37-col 6 line 3];

- a set of routers, coupled to the servers and the client computer, for storing IP routes between the servers and the client [Arndt, routers, col 6 lines 14-26]; and

- a domain name system server, coupled to the routers, for downloading the IP routes from the routers for storage in an IP routes database, and in response to a query containing the domain name received from the client computer selecting one of the IP

routes contained in the IP routes database which meets predetermined criteria [Arndt, DNS server, discovery database, select router based on routing protocol being used, col 5 line 50-col 6 line 3].

18. As per claim 26, Arndt discloses a cache database, coupled to the domain name server for storing previously selected IP routes [Arndt, discovery database, col 5 lines 10-15; col 6 lines 14-26].

19. As per claim 27, Arndt discloses the IP routes database is for storing all of the IP routes [Arndt, discovery database, col 5 lines 10-15; col 6 lines 14-26].

20. As per claim 28, Arndt discloses a domain name system server includes an enhanced address resource record storing the single domain name (i.e.: a DNS), a list of the servers and routers, a set of router retrieval parameters, a default IP router; and the domain name system server accesses the retrieval parameters in order to select the IP routes [Arndt, default router, DNS server, col 3 lines 25-33].

21. As per claims 29,51 Arndt discloses the client IP address corresponds to a client and the set of server IP addresses correspond to respective servers, wherein the set of IP routes comprises IP routes from the client to respective servers, and wherein selecting the IP route comprises selecting the IP route corresponding to the server that

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satisfies the predetermined criteria [Arndt, select DNS from the last user specific configuration, col 5 line 50-col 6 line 3; predetermined time, col 4 lines 1-25].

22. As per claims 30,52 Arndt discloses selecting the IP route to the server associated with a shortest path from the client [Arndt, shortest path, col 5 lines 58].

23. As per claim 31, Arndt discloses the assigning, receiving, retrieving, and selecting acts are performed by a domain name system (DNS) server [Arndt, DNS, col 5 lines 37-col 6 line 3].

24. As per claim 32, Arndt discloses retrieving a set of IP routes where each IP route is defined by at least two IP addresses [Arndt, multiple non-contiguous groups of address ranges, col 6 lines 26-43].

25. As per claim 33, Arndt discloses prior to retrieving the set of IP routes, checking a database in a cache to find an IP route entry containing an IP route previously indicated as being a best IP route; and in response to finding the IP route entry in the cache, using the IP route previously indicated as being the best IP route as the selected IP route [Arndt, the best IP address range, col 4 line 26-6 line 36].

26. As per claim 34, Arndt discloses retrieving the set of IP routes is performed from an IP routes database, and wherein retrieving the set of IP routes from the IP routes

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database is in response to determining that the IP route entry is not present in the cache [Arndt, the IP determined to not be in use, col 5 lines 37-48].

27. As per claim 35,49 Arndt discloses accessing a field in a record, the field to indicate one of plural techniques for downloading IP routes from routers to the DNS server; and based on the technique identified by the field, establish one or more sessions (links) with the routers to download IP routes from the routers into an IP routes database in the DNS server, wherein retrieving the set of IP routes is performed from the IP routes database [Arndt, discovery database, col 5 lines 10-15; col 6 lines 14-26].

28. As per claim 36, Arndt discloses establishing one or more Border Gateway Protocol (BGP) sessions with the routers to download IP routes from the routers into the IP routes database, in response to the field indicating use of BGP retrieval [Oehrke, BGP,OSPF, col 11 lines 1-10].

29. As per claims 37,50 Arndt discloses establishing one or more Simple Network Management Protocol (SNMP) sessions with the routers to download IP routes from the routers into the IP routes database, in response to the field indicating use of Management Information Base (MIB) retrieval [Arndt, SNMP, col 5 line 44].

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30. As per claim 38, Arndt discloses establishing one or more Telnet sessions with the routers to download IP routes from the routers into the IP routes database, in response to the field indicating use of Telnet retrieval [Oehrke, FTP, col 4 line 15].

31. As per claim 39, Arndt discloses establishing one of plural different types of sessions (links) corresponding to the one of plural techniques specified by the field to download IP routes from the routers into the IP routes database [Arndt, link status, col 3 lines 1-10].

32. Claims 15-24;40-48 contain similar limitations set forth in claims 1-14,29-39. Therefore claims 15-24,40-48 are rejected for the same rationale set forth in claims 1-14,29-39.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thong Vu*, whose telephone number is (571)-272-3904. The examiner can normally be reached on Monday-Thursday from 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Andrew Caldwell*, can be reached at (571) 272-3868. The fax number for the organization where this application or proceeding is assigned is 703-872-9306

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thong Vu
Patent Examiner
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